

ABSTRACT

An electro-optical system capable of being embarked aboard mobile ground or flying units, to determine the optical flow generated by obstacles in relative motion with respect to the mobile unit. The system comprises radiation emitter means (5), receiver means (1) for converting the radiation reflected by the objects into electrical signals and means (8) for processing the signals generated by the receiver means. The receiver means (1) are based on vision sensors with matrix configuration. The emitter means (5, 6) shape the radiation beam in such a way that the radiation reflected by the objects and collected by the receiver means impacts at least on a part of the receiver matrix. The processing means compute the optical flow only on the elements of the receiver matrix that are impacted by the radiation.

(Figure 1)